

2-7 Graphing Inequalities

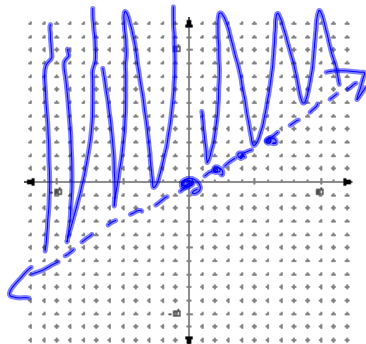
Example 1

$$y = mx + b$$

$$2y > x$$

$$y > \frac{1}{2}x$$

Test point
(0, 5) ✓ shade



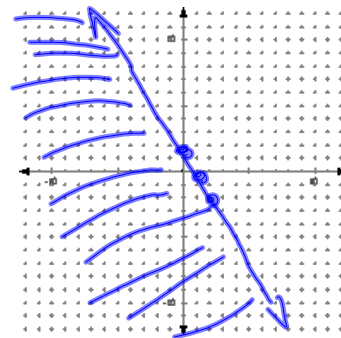
Example 2

$$4x + 2y \leq 4$$

$$2y \leq -4x + 4$$

$$y \leq -2x + 2$$

(0, 2)
m = -2



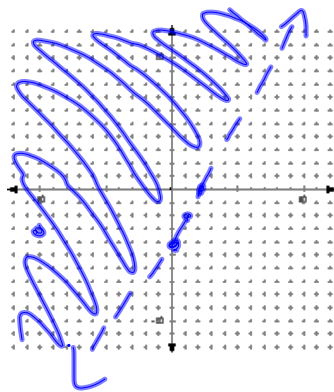
Example 3

$$6x - 3y < 12$$

$$y > +2x - 4$$

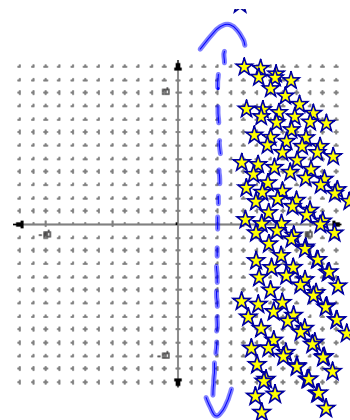
(0, -4)
m = 2

Test
(6, -3)



Example 4

$$x > 3$$



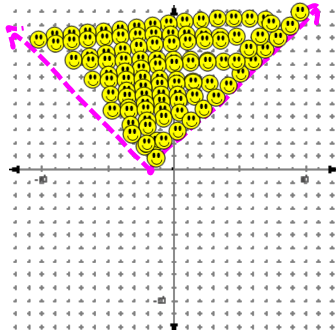
Absolute Value

Example

$$y > |x + 2|$$

$$V(-2, 0)$$

$$a = 1$$

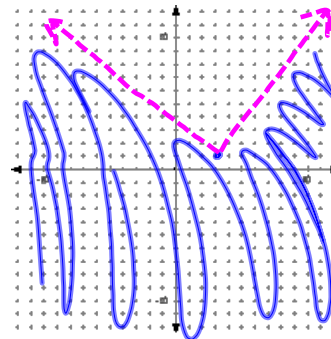


Example

$$y < |x - 3| + 1$$

$$V(3, 1)$$

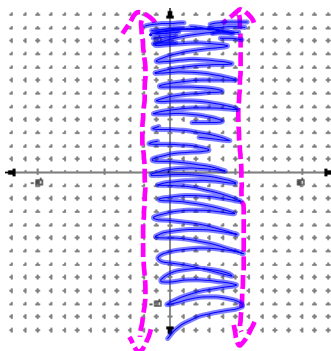
$$a = 1$$



Example

$$-2 < x < 5$$

$$x > -2 \text{ And } x < 5$$



SHOPPING For Exercises 10–12, use the following information.
Gwen wants to buy some cassettes that cost \$10 each and some CDs that cost \$13 each. She has \$40 to spend.

10. Write an inequality to represent the situation, where c is the number of cassettes she buys and d is the number of CDs.

11. Graph the inequality.

12. Can she buy 3 cassettes and 2 CDs? Explain.

Open to page 98
#s 10-12

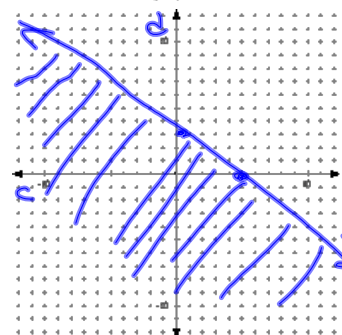
$$10c + 13d \leq 40$$

$$13d \leq -10c + 40$$

$$d \leq -\frac{10}{13}c + 3\frac{1}{13}$$

$$(0, 3\frac{1}{13})$$

$$(4, 0)$$



HW

p 98 14, 16, 20, 23, 24, 26-28, 35-37

Graph Paper